

#### ABSTRACT OF THE DISCLOSURE

An exemplary receiver demodulates an amplitude modulated data signal received in association with a reference signal, wherein a transmit power of the data signal is unknown to the receiver circuit, by determining a scaling factor based on the reference and data signals. Thus, an exemplary receiver estimates scaling factors indicative of the received amplitude of a data channel signal that is transmitted at a power different from that of the reference channel being used to estimate the radio channel properties. The scaling factor may be used to correct the amplitude of information symbols recovered from a received data signal such that they are moved closer in amplitude to intended points within an amplitude modulation constellation and/or to scale nominal points in a reference constellation used in demodulating the received symbols.